77-PIC-JAG

Practitioner Identification of Competencies for Users of Aversive and Deprivation Treatment Procedures: A Resurvey of Screening Criteria

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Submitted To Professional Psychology

Abstract

The results of a prior survey of practitioners on the relevancy of proposed competencies and the adequacy of screening criteria for users of aversive and deprivation treatment procedures indicated that certain competencies should be added or deleted and that major revisions to screening criteria should be made. These latter revisions were of such an extensive nature that a second survey of screening criteria was conducted. Second survey results were uniformly improved. Ratings of the adequacy of screening criteria improved in five of six content category areas. Satisfaction with the adequacy of screening criteria also varied as a function of type of criterion with oral examination being rated least adequate and responses to taped simulations being rated most adequate. The debate over certification of practitioners should be separated from research on competencies.

Practitioner Identification of Competencies for Users of Aversive and Deprivation Treatment Procedures: A Resurvey of Screening Criteria

The issues of regulation of behavior intervention procedures and certification of behaviorists who demonstrate specific competencies have been debated by behavior analysts for several years. Noteworthy in this regard were the 1971 Conference on Behavior Analysis in Education at Lawrence, Kansas (Thomas, Note 1), the 1974 Drake Conference on Professional Issues in Behavior Analysis (Wood, 1975), and the 1977 report of the Midwestern Association of Behavior Analysis Education and Evaluation Committee (Krapfl, Note 2). The primary results of these meetings were recommendations for further debate and study.

Despite this outcome (or perhaps because of it), several programs self-initiated attempts to certify individuals as competent to perform specific jobs. For example, the Achievement Place program initiated certification of teaching parents (Braukmann, Fixsen, Kirigin, Phillips, Phillips, and Wolf, 1975) and the Behavior Analysis Follow Through project implemented a program certifying classroom teachers who use their instructional procedures effectively (Bushell, Jackson, and Weis, 1975).

In the State of Minnesota, a series of Civil Service job descriptions based on the behavioral competencies identified by the Sulzer-Azaroff. Thaw, and Thomas (1975) survey were developed and eventually became known as the behavior analyst career ladder (Jackson and Thomas, Note 3). Eligibility for an entry level job in the career ladder was contingent upon a demonstration of knowledge via a multiple choice examination. Once hired, continuation of employment was contingent upon a much more extensive demonstration of on-the-job competencies. It quickly became apparent that

program directors and other employers viewed the addition of an individuals name to the list of eligible civil service applicants as a certification that the individual possessed a high skill level. This unwarranted assumption was further strengthened by a 1976 ruling in the Welch vs. Likins "right to treatment" case that behavior analysts could be substituted on a one-for-one basis for psychologists on a state hospital staff.

Elaboration of the State of Minnesota guidelines controlling the utilization of aversive and deprivation treatment procedures paralleled the development and popularization of the behavior analyst career ladder. The application of the guidelines depends on the identification of "experts" in the use of aversive and deprivation procedures. "Experts" will be defined on the basis of objective competencies. An interdisciplinary state-wide and national survey on the relevancy of the career ladder competencies to the guidelines and the adequacy of screening criteria was thus conducted. Survey results demonstrated widespread agreement between practitioners and non-practitioners. Thirty-seven of the forty-five competencies were rated as relevant or better than relevant. Research competencies were rated as less than relevant. All forty-five criteria were rated as adequate or more than adequate. However, of the large number of written comments related to specific competency and criterion items, the vast majority concerned suggested changes in criteria. A panel was convened to recommend a screening process and to begin the task of revision. A multi-level certification process was recommended. Revisions of criteria were of such an extensive nature that it was ultimately decided to conduct a second survey as a check that first survey results had been interpreted accurately.

Survey Description and Sample

The survey contained 32 items consisting of a competency statement and a suggested screening criterion. Twenty-two of the competency/screening criterion combinations specified skills necessary to obtain initial certification as an "expert" under the guidelines (see Appendix A for a complete listing of initial certification competency/screening criterion combinations). Ten additional combinations were competency demonstrations required to retain certification (see Appendix B for a complete listing of certification retention competency/screening criterion combinations). The 32 items can be grouped into six general content categories. Items from each category were included in the initial certification, as well as the certification retention sections of the survey.

1) Measurement, which included items relating to knowledge of observational recording systems and variables which confound evaluation of treatment effects and to demonstrations of skills in target identification, observational data collection, and attainment of reliability
2) Ethics, which included items relating to knowledge of professional ethical standards and major ethical issues and to demonstration skills in incorporating ethical standards in treatment programming.
3) Law, which included items relating to knowledge of federal and state laws as they affect treatment practices.
4) Programming, which included items relating to knowledge of and/or demonstration of skills in the essential steps in program design, writing treatment program, reporting on treatment program results. variables which may contraindicate specific treatment procedures,

appropriate and realistic program goals, and the primary literature on behavior change procedures.

5) Supervision, which included items relating to knowledge of procedures for altering staff behaviors with regard to program implementation and demonstration of skills in staff and parent training.

6) Communication, which included items relating to demonstration of skills in written reports, data analysis, and oral reports.

In addition to these content categories, the screening criteria can be classified according to the testing circumstances and type of behavioral product required from a candidate. Thus, two of the criteria were identified on the survey as oral interview items requiring oral examination. Ten criteria were on the job performance as certified by a review committee at the candidate's work site. Eleven criteria required essay, short answer, or multiple choice responses to written examination questions. Eight criteria involved simulation exercises in which the candidate is required to respond to videotaped material or a narrative case presentation. One criterion combined a simulation exercise with a written examination.

Survey respondents were asked to rate the adequacy of each screening criterion in measuring its corresponding competency on a scale from 1 ("inadequate") to 5 ("highly adequate"). Since competencies rated as less that "relevant" in the previous survey were deleted in the present survey and since the surviving competencies were not significantly altered, respondents to the present survey were not asked to independently rate the relevance of competencies to users of aversive and deprivation procedures. Space was also provided for comments regarding each individual competency

and screening criterion items.

A total of 202 surveys were distributed. Of these, 152 were sent to members of the Minnesota Association for Behavior Analysis (MinnABA), a state-wide professional organization whose membership consists of professionals from a wide variety of occupations, including psychologists, teachers, social workers, physicians, psychiatrists, nurses, speech therapists, and rehabilitation therapists. The majority of MinnABA members are practitioners who will be directly affected by the guidelines. The remaining 50 surveys were sent out-of-state to those members of the national sample for the first survey who had returned completed first-survey questionnaires. The original national sample had consisted of 218 professionals who had published articles based on the use of aversive and deprivation techniques.

Survey Results

Of the 202 surveys distributed, 80 completed surveys were returned (i.e., 39.6% of the distributed surveys). The national return rate (54.0%) was higher than the MinnABA return rate (34.9%). Data from completed surveys were amenable to numerous analyses. Those reported here include: 1) ratings for screening criterion items; 2) ratings for criterion, items by content category and type of criterion; 3) item comments; 4) content of criterion related comments; and 5) comparison of first and second survey results.

Screening Criteria Ratings

On the 1 ("inadequate") to 5 ("highly adequate") rating scale, the average criterion item generated a mean rating of 3.99 or almost midway between "adequate" and "highly adequate" as a measure of the corresponding

competency. Mean ratings for individual criterion items ranged from 3.59 to 4.33 (Range = 0.74). It can be seen in Table 1 that the mean

Insert Table 1 about here

ratings from the MinnABA and National samples were identical (i.e., 3.99). Mean ratings for individual criterion items ranged from 3.52 to 4.40 (Range = 0.88) for the MinnABA sample and from 3.58 to 4.54 (Range = 0.96) for the national sample. In view of the fact that there were neither systematic nor major differences between the samples, MinnABA and national data are combined in all other analyses.

The survey items were grouped into six content categories. These categories and the mean ratings for criterion items in each are presented in Table 2. Mean ratings in the Measurement, Law, and Programming categories

Insert Table 2 about here

were at or above 4 while mean ratings for Ethics, Supervision, and Communication were slightly below a 4 rating. Mean ratings for content categories ranged from 3.66 to 4.10 (Range = 0.44).

Screening criteria were also grouped into five categories on the basis of testing circumstances and the type of behavioral product required. The mean ratings for items in each of the five criterion type categories can be seen in Table 3. Simulation criterion items were rated as the most

Insert Table 3 about here

adequate type of criterion. No simulation item was rated less than 3.93 and six were rated above 4.00. With the exception of the combined written examination/simulation item, other written examination items were rated as the second most adequate type of criterion followed by review committee and oral examination items. However, respondents rated every criterion item regardless of type as more than "adequate" as a competency measure.

Comments

The survey included a space for commentary following each of the 32 competency/criterion items. Of the completed surveys, 57 (71.3%) contained one or more specific item-related comments. A total of 361 separate item comments were received. Each comment was scored as falling in one of three possible categories:

1) Comments-suggesting possible changes in a competency
2) Comments suggesting possible changes in a criterion
3) Irrelevant comments

Thus, only comments which either made specific suggestions for item changes or at least suggested a direction that changes might take were counted in the first two groups. All other comments were scored as irrelevant including those that were redundant with the respondent's numbered rating (e.g., "scrap it," "necessary item," "very important screening criterion") and comments which might be interesting but had nothing to do with the survey instructions to provide "alternate suggestions" (e.g., "we train this way," "good question for general clinicians as well," "I'm confused"). This scoring procedure resulted in 27 (7.5%) competency-related comments, 222 (64.5%) criterion-related comments, and 112 (31.0%) irrelevant comments.

In view of the importance of criterion-related comments in the first

survey and the fact that the majority of all comments were criterion related in the second survey, a separate analysis of the content of these comments was undertaken. In this analysis, as in the preceding one, 75 representative comments (i.e., 20.8% of all comments) were independently classified by two scorers. The formula for computing inter-scorer reliability was 100 X [Number of Agreements / (Number of Agreements + Number of Disagreements)]. Inter-scorer agreement was 90.67%.

Results are presented in Table Over half of the criterion comments

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Insert Table 4 about here

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fall into the "Be More Specific" category. This category includes comments relating to the fact that checklists had not yet been developed, exam items had not yet been written, cut-off scores had not been determined, and the like. All of these comments are viewed as legitimate in the sense that they indicate additional work that would have to be accomplished before individuals could actually be assessed with the screening criteria. The remaining 104 criterion-related comments were classified in four additional categories. A "Larger Sample of Behavior" included comments calling for more questions in written exams, five videotapes instead of two in simulation exercises, etc. An "Alternate Sample of Behavior" included comments such as simulation exercises should be used instead of a written examination. "More or less Accurate Behavior" refers to respondent's feelings that cut-off scores were too stringent or not high enough. There were no consistent trends in these categories and none of the criterion comments outside of the "Be More Specific" category are

viewed as having serious implications for revision of criteria. There were no significant correlations between criterion ratings and the frequency of criterion comments, irrelevant comments or total comments.

Comparison of First and Second Survey Results

The first survey resulted in the deletion of several competencies and a reduction in content categories but the surviving competencies were basically unaltered. The first survey also resulted in the decision to extensively revise screening criteria. The second survey, dealing primarily with these criteria, generated results that were uniformly better than results of the first survey. Key comparisons are presented in Table 5.

Insert Table 5 about here

Fewer surveys were distributed the second time since the national sample was restricted to those who responded to the first survey. This partially accounts for the higher return rate for the second survey. An additional factor may have been the interest generated by the first survey.

There were proportionally fewer second surveys with one or more item comments as compared with first survey comments. There were also fewer comments per respondent and comments per item in the second survey. In addition, there were no significant correlations between criterion ratings and comment frequency in the second survey while there were highly significant correlations in the first survey. This is cautiously interpreted as reflecting increased satisfaction with the competencies and criteria since respondents were asked to comment when they were dissatisfied with an item.

The mean criterion rating was higher for second survey items than for first survey items (i.e., 3.99 versus 3.75) and the range of item ratings was narrower. Increased ratings are, of course, the best evidence of increased satisfaction with items.

Although it should be remembered that screening criterion items were extensively revised, mean criterion item ratings in content categories can be compared in the first and second surveys. The measurement and behavioral observation categories in the first survey were combined in the measurement category in the second survey. The administration and training categories in the first survey became the supervision category in the second survey. The behavior modification model, design, assessment, goal formulation and targeting, and techniques categories in the first survey were combined in the programming category in the second survey. And, finally, the ethics, law, and philosophy category in the first survey was subdivided into separate ethics and law categories in the second survey. These content category comparisons are presented in Table 6. Increases in

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Insert Table 6 about here

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ratings were obtained for all content categories except administration, training/supervision which remained constant with a 3.66 rating.

Two comparisons with regard to type of screening criterion are possible. Written examination criteria improved from the first survey ($\overline{X}$ rating = 3.88) to the second ($\overline{X}$ rating = 4.02). Written examination items were more specific in the second survey but suggestions to be even more specific constituted over half of all criterion-related comments the

second time. Review committee certification criteria in the second survey replaced supervisor certification criteria in the first survey. Rating improvement was again obtained (i.e., 3.62 in the first versus 3.89 in the second). Oral examination criteria were added to the second survey. Although these were the lowest rated type of criterion in the second survey, the mean oral examination criterion rating (i.e., 3.75) was higher than the ratings for over 50% of all criterion items in the first survey. Simulation criteria were also added to the second survey in response to first survey criticism. Since simulation criteria generated the highest mean rating (i.e., 4.15), it can be concluded that they were generally satisfactory to respondents.

Summary and Concluding Remarks

In response to government regulation controlling the utilization of aversive and deprivation treatment procedures, two surveys were conducted. The first survey asked respondents to rate the relevancy of proposed competencies to the identification of "experts" in the use of these procedures and to rate the adequacy of proposed screening criteria as measures of competency. This survey resulted in the deletion of several competencies such as the conduct of research, the addition of others such as familiarity with aversive stimulation devices, and the extensive revision of screening criteria. The latter revisions led, in turn, to the second survey in which respondents were asked to rate the adequacy of the new screening to the competencies. Second survey results were an improvement over first survey results and it is felt that this second version of competencies and criteria constitutes a satisfactory definition of an "expert" in the use of aversive

and deprivation treatment procedures.

From the outset, it was assumed that one could not be expert in the use of aversive and deprivation procedures without also being expert in the use of positive treatment procedures. In fact, the first survey competencies and criteria did not even include specific reference to aversive or deprivation interventions. Many respondents commented that items should be modified in this direction or added to the list of competencies and criteria. Thus it seems obvious that respondents felt that expertise in the use of positive treatment procedures did not necessarily qualify an individual to use aversive and deprivation procedures. However, neither survey yielded data that would call the original assumption into question.

The specification of competencies is essential in identifying expertise. To give but two of many examples, state psychological licensing boards ask candidates to list areas in which they are expert and psychologists' requests for hospital privileges under JCAH standards require ratings of expertise in areas ranging from behavior modification to psychodrama. However, the specification of competency areas is only a first step and may be almost meaningless in the absence of objective criteria for assessing them. In the case of state licensing boards, recommenders must agree that the candidate is indeed expert in the areas reported and supervisors fill the same function in JCAH requests. However, response to the two surveys presented here indicates that these criteria are not sufficient.

Not only did survey respondents devote the majority of their commentary to screening criteria, but they also revealed marked preferences

for types of criteria. Supervisor certification criteria were held in general disrepute. Respondents were troubled that these represented the views of a single person and that supervisors have been known to be less qualified than supervisees. Oral examination criteria also left something to be desired. Respondents felt that these represented a limited sample of behavior and perhaps only a measure of verbal skill under stress. Performance in an oral examination may be less relevant today than during the sixteenth century when it was considered essential that a candidate for the degree of doctor of philosophy be able to defend a proposition against all comers. Review committee criteria were not perfect. These are based on the review of on-going performance and, in particular, the receipt of complaints regarding an individual's performance. Although complaints are important, they are inadequate as the sole basis for evaluating competency and there is a feeling that clients should be protected against the possibility of incompetence and not simply the remediation of incompetent behavior once it occurs. Written examination criteria were held in generally high regard although many respondents stated that these also represented limited samples of behavior. Simulation exercise criteria were well liked perhaps because they are objective measures of behavior very close to on-the-job performance. The fact is that each type of criterion is a measure of a different and limited sample of behavior. Only a combination can adequately assess an individual's full competency.

At this point, it is appropriate to discuss the current status of the State of Minnesota guidelines which served as the setting event for the

survey activities. Work on the development and implementation of the guidelines continues. The second survey definition of an "expert" in the use of aversive and deprivation treatment procedures has been incorporated into the most recent revision of the guidelines. In addition, the screening procedures used to identify individuals eligible for employment within the Civil Service career ladder for behavior analysts have been modified to incorporate some of the survey results.

It is time to call a halt to the debate over whether behavior analysis should be regulated or not and whether behavior analysts should be certified or not. This debate is increasingly irrelevant for, while it has continued, behavior analysis has been regulated and behavior analysts have been certified. It is time to focus attention (including research activities) on the competencies of behavior analysts, the ways in which competencies are acquired, and the ways in which they are assessed. Questions relating these topics to improvement in the quality of services to clients and to the development of behavior analysis as a professional discipline must be answered. And, most importantly, it is time to refocus attention on the outcomes of behavioral treatment procedures and programs implemented by competent practitioners.

Reference Notes

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Table 1

Overall Mean Ratings and Rating Ranges for Survey Items

Sample	$\bar{X}$ Rating	Rating Range
MinnABA	3.99	3.52 - 4.40 (0.88)
National	3.99	3.58 - 4.54 (0.95)
Total	3.99	3.59 - 4.33 (0.74)

Table 2

Mean Rating of Criterion Items by Content Category

Category	Number of Items	$\bar{X}$ Rating
Measurement	6	4.10
Ethics	4	3.94
Law	5	4.09
Programming	13	4.00
Supervision	2	3.66
Communication	2	3.85

Table 3

Mean Rating of Criterion Items by Type of Criterion

Category	Number of Items	$\bar{X}$ Rating
Simulation	8	4.14
Written Examination/Simulation	1	4.13
Written Examination	11	4.02
Review Committee Certification	10	3.89
Oral Examination	2	3.72

Table 4

Analysis of the Content of Criterion Related Comments

Content of Criterion Comment	Number	Percentage
Be More Specific	118	53.15
Larger Sample of Behavior	30	13.51
Alternate Sample of Behavior	29	13.06
More or Less Accurate Behavior	8	3.61
Minor Wording or Sequence Change	37	16.67
TOTAL	222	100.00

Table 5

General Comparisons of First and Second Surveys

	First Survey	Second Survey
Surveys Distributed	311	202
Return Rate	27.0%	39.6%
Surveys with One or More Item Comments	82.0%	71.3%
Comments per Item	16.27	11.28
Comments per Respondent	8.52	4.51
Mean Criterion Item Rating	3.75	3.99
Criterion Item Rating Range	3.28-4.15 (0.87)	3.59-4.33 (0.74)

Table 6

Mean Ratings of Criterion Items by Content Category for the First and Second Survey

First Survey Category	First Survey $\bar{X}$ Rating	Second Survey Category	Second Survey $\bar{X}$ Rating	Change In Rating
Measurement; Behavioral Observation	3.93	Measurement	4.10	+0.17
Ethics (from Ethics, Law, and Philosophy)	3.76	Ethics	3.94	+0.18
Law (from Ethics, Law, and Philosophy)	3.87	Law	4.09	+0.22
Behavior Modification Model; Design; Assessment Goal Formulation, and Targeting; Techniques	3.81	Programming	4.00	+0.19
Administration; Training	3.66	Supervision	3.66	0.00
Communication	3.80	Communication	3.85	+0.05

Appendix A

Competencies Required to Obtain Initial Certification and Overall Mean Ratings for Each Screening Criterion

Content Category	Competency	Screening Criterion	Mean Rating
Measurement	Identifies target behaviors in relation to antecedent and consequent environmental events which are associated with them and identifies direction of desired behavior change.	(Simulation exercises) Given one video taped example each of inappropriate stimulus control, behavioral deficit, and behavior excess, the candidate identifies the appropriate targets, the associated antecedent and consequent events and specifies the direction of desired behavior change.	4.08
	Conducts reliable measurement of targeted behaviors.	(Simulation exercises) Given a video taped presentation of target behaviors, a recording procedure, response definition, data sheet and other necessary equipment, the candidate measures with 80% or better reliability using each of the following measurement techniques: a) frequency count; b) time sampling; c) interval recording; d) duration recording.	4.18
	Selects a measure and develops a scoring method (data sheet design, instrument selection, procedure, instructions, etc.) for a specified target behavior, including indentification of relevant collateral behaviors.	(Simulation exercises) Given a video taped presentation of a behavior to be targeted for deceleration, the candidate operationally defines the targeted response and at least two relevant collateral behaviors, specifies and defines the type of recording procedure to be used, with specific directions on how the procedure is to be used, designs a sample data sheet, and justifies the selections made.	4.33

Content Category	Competency
	Operationally defines and illustrates observational recording techniques.
	Identifies variables which may prevent appropriate evaluation of treatment effects.
Ethics	Is familiar with ethical issues, standards and practices.
	Incorporates ethical standards in program design, implementation, communication, and evaluation.

(Continued)

Screening Criterion	Mean Rating
(Written test) Given five recording techniques (frequency count, interval recording, time-sampling, duration recording, and permanent product), the candidate operationally defines each and matches each technique with appropriate examples.	4.09
(Written test) Can explain the effects of at least five of the following: maturation, non-contingent reinforcement, concurrent shifts in multiple independent variables, sensory abnormalities, improper definition of dependent variable, consistency of implementation of treatment procedures. Given two reports of treatment effects, can identify variables which confound the relationship between treatment and outcome.	4.01
(Written test) Given bibliography of selected readings, the candidate will score at least 90% on an objective examination.	3.92
(Simulation exercises) Given an illustrative problem situation, an aversive and/or deprivation program designed by the applicant is rated for consistency with a checklist of ethical standards. The checklist on ethical standards will be derived from the standards recommended by the Association for the Advancement of Behavior Therapy to the American Psychological Association.	4.09

Appendix A (Continued)

Content Category	Competency	Screening Criterion	Mean Hating
	Identifies major ethical issues: a) whose agent is the therapist? b) who decides what is best for the client? on what grounds? c) who has responsibility for the client? d) how does one decide who receives treatment and who doesn't? e) what are the pros and cons for changing behavior? using aversive consequences? reporting procedures and results? f) how much and what type information is given to the client? g) how are the human rights of this individual and the family best safeguarded?	(Oral interview) Given an illustative problem situation, the candidate will relate these major issues to the problem solution.	3.85
Law	Identifies Federal and State laws and legal precedents as they affect the conduct of educational-treatment activities.	1) (Written test) Given a bibliography of appropriate laws and legal precedents, the candidate will pass an objective examination with 90% accuracy. At a minimum, the bibliography will reference the following principles: a) treatment with trained staff in adequate numbers; b) the least restrictive alternative in treatment methods and setting; c) freedom from deprivation of normal goods and services without due process; d) freedom from participation in programs without informed consent being given; e) right to withdraw consent from treatment programs; f) education regardless of handicap for school aged; g) minimum wage in non-therapeutic work situations; h) individualized treatment plan. 2. (Simulation exercise), Given an illustrative problem situation, the candidate will correctly identify violations of legal precedents and/or laws.	4.25

Content Category	Competency
	Is familiar with Minnesota guidelines.
	Knowledge of current regulations and utilization of FDA approved aversive stimulation devices inclusing types of available instrumentation, knowledge of dangers and side effects and knowledge of dangers associated with the operation of apparatus.
Programming	Demonstrates familiarity with current literature on application of widely validated aversive and deprivation procedures.
	Programming for behavior change: Lists the essential steps in designing and conducting behavior change activities directed toward altering a behavioral excess or deficit.

(Continued)

Screening Criterion	Mean Rating
(Written test) Passes objective exam on the details of the Minnesota guidelines.	4.22
(Written test and simulation exercise) The candidate will pass an objective test over this area and will correctly identify hazards shown in at least three video taped segments.	4.13
(Written test) Given bibliography of selected readings, the candidate will pass objective test on content. In Addition, the candidate will appropriately reference this literature in proposing procedures to alter a problem behavior in the simulation exercises required to demonstrate competencies in designing programs.	3.90
(Written test) Given a brief narrative description of the problem and its history, the candidate can describe in writing the steps necessary to design a behavior change program based on positive reinforcement. The description must include at least the following: a) the targeted behavior stated in objective and quantifiable terms; b) the objective or goal of the treatment program; c) the change procedure to be employed, including the stimulus circumstances and environment under which the treatment would take place, the baseline procedures, the positive consequences to be provided, the	4.32

Appendix A (Continued)

Content Category	Competency	Screening Criterion	Mean Rating
		positive consequences to be provided, the schedule or other procedure of delivering the consequences contingently; d) the method of measuring the behavior and consequences throughout the treatment program; e) control of probe techniques to determine the necessity of continuing treatment; f) a plan for program generalization and maintenance; g) the conditions under which the program would be changed or terminated.	
	Writes a proposal for a behavior change (i.e., habilitative/educational) program.	(Simulation exercise) Given a brief narrative description of the problem and its history and a video-taped demonstration of the problem behavior, the candidate writes a program which incorporates the following: a) the targeted behavior stated in objective and quantifiable terms; b) the objective or goal of the treatment program; c) the change procedure to be employed, including the stimulus circumstances and environment under which the treatment would take place, the baseline procedures, the positive consequences to be provided, the schedule or other procedure of delivering the consequences contingently; d) the method of measuring the behavior and consequences throughout the treatment program; e) control or probe techniques to determine the necessity of continuing treatment; f) a plan for program generalization and maintenance; g) the conditions under which the program would be changed or terminated.	4.22

Appendix! A (Continued)

Content Category	Competency	Screening Criterion	Mean Rating
	Provides a written report of the program effects.	(Simulation exercise) Given illustrative case study material, the candidate will write a report suitable for submission to a county or state agency at the time of termination of treatment or transfer. The report will include the following elements: a) client description, name, age, sex, diagnostic and other psychometric information; b) a brief history leading to the problem which was treated; c) an objective description of the problem including quantification of the pre-treatment problem intensity and the current levels of behavioral occurrences (frequency, duration, etc.); d) a description in minimally technical but accurate language of the procedures employed; e) a quantitative, (preferably graphic) summary plus a narrative description of the results; f) recommendations for methods of increasing the probability of program generality to a new setting.	**4.30**
	Identifies variables which may contra-indicate specific treatment procedures.	(Written test) For each of five procedures the candidate can identify the possible client/or program characteristics which would indicate rejection of these procedures as inappropriate or unsafe. Examples include: a) using Gatorade or milk for hydration in the Foxx-Azrin toilet training program; b) painful shock; c) physically enforced over-correction; d) food/candy reinforcement; e) seclusion time-out.	3.84

Appendix A (Continued)

Content Category	Competency	Screening Criterion	Mean Rating
	Is familiar with procedures (which are frequently used in behavior therapy and in educational/habilitative programming) resulting from identification of behavior problems.	(Written test) The candidate can identify for each item on a selected list of procedures, the following characteristics: degree of intrusiveness (i.e., not intrusive vs mild to very intrusive), time to become effective (very short vs moderate to long), durability and generality of effect (very durable and easily generalized vs limited durability and generalizability), likelihood of side effects (none or minimal *vs* occasional to frequent), and risk of harm to client or staff (none or minimal vs significant). At a minimum, the list of procedures will include the following: 1) extinction; 2) reinforcement of incompatible behaviors; 3) time-out in room; 4) graduated guidance; 5) restitution; 6) response cost; 7) required relaxation; 8) time-out (separation); 9) restraint; 10) noxious noises, smells, etc.; 11) deprivation of food or water; 12) slapping, spanking; 13) painful skin shock.	3.83
	Is familiar with procedures for arranging contingent relationships between targeted responses and consequences which are available in the natural invironment.	(Written test) Given as examples three target behaviors which are measured respectively by their duration, intensity, and frequency, the candidate will specify consequences for each which should increase the behaviors and will also specify consequences for each which should decrease the behavior. The consequences identified should already exist in this environment or be available without substantial additional funds or resources. The candidate will also specify the treatment environment (preferably the candidate's work setting).	3.94

Content Category	Competency
	Must be able to devise at least two alternatives in each of three levels of intrusiveness of intervention.
	Is familiar with learning principles and the treatment procedures which have been derived from them.

(Continued)

Screening Criterion	Mean Rating
(Simulation exercise) Given a video taped example of a behavior to be decelerated, the candidate will briefly describe two alternative treatment procedures from each of the three levels of intrusiveness, all of which can be justified as having a reasonable likelihood of reducing the problem behavior.	3.93
(Written test) Given a sample of at least twenty written definitions and/or examples, the candidate will correctly match from a list of phenomena and procedures with at least 90% accuracy. The pool from which the examples will be taken will include at least the following: Definitions: operant conditioning, positive reinforcement, negative reinforcement, differential reinforcement, punishment, avoidance, time-out, respondent conditioning, respondent extinction, covert sensitization, DRO, DRH, DRL, baseline, probe, deprivation, escape, required relaxation, token economy, EST, shock, punishment, reliability, validity, steady state, restitution. Examples: stimulus control, shaping, chaining, fading, continuous reinforcement, interval schedule, multiple schedule, extinction, response cost, situation, desensitization, aversion therapy, over-correction, positive practice, reversal, restraint, graduated guidance, flooding, superstitious reinforcement, Premack Principle. (Simulation exercise) When shown video taped samples of the following procedures, the candidate can correctly identify the procedure with 70% accuracy on	3.87

Content Category	Competency
Supervision	Identifies pool of procedures which may be used in human service settings to alter staff behavior in order to enable implementation of treatment programs.
Communication	Communication: Written and graphic.

(Continued)

Screening Criterion	Mean Rating
a multiple choice test. Procedures: positive reinforcement (social, token), stimulus control, extinction, seclusion time-out, time-out, response cost, reinforcement of incompatible behavior, desensitization, aversion therapy, positive practice, over-correction, DRO, contingent observation, restraint, graduated guidance, flooding, superstitious reinforcement, restitution.	
(Oral interview) Describes procedures which can be used without violating DPW work rules, union contracts or Department of Personnel policies and procedures.	3.59
(Simulation exercise) 1. Written: Explicitly describes treatment program, in writing, so that a naive individual who follows the program does not make errors in demonstrating the procedure. (The task specified in Programming Competency #3 is utilized for evaluative purposes.) 2. Graphic: Given video tape simulation of data collection situation and the raw data which results from the observation, the candidate will design a graph, plot the data, label the ordinates and otherwise identify the variables shown so as to graphically communicate the behavioral changes shown in the video taped presentation. (The task specified in Programming Competency #4 is utilized for evaluative purposes.)	3.96

Appendix B

Competencies Required to Retain Certification and Overall Mean Ratings for Each Screening Criterion

Content Category	Competency	Screening Criterion	Mean Rating
Measurement	Conducts reliable measurement of targeted behaviors.	Treatment programs submitted for committee review include reliability checks on data required to evaluate effects.	3.93
Ethics	Incorporates ethical standards in program design, implementation, communication, and evaluation.	Two aversive and/or deprivation programs designed by the applicant are rated by the Review Committee for consistency with a checklist of ethical standards.	3.90
Law	Does not violate Federal and State laws and legal precedents as they relate to the conduct of educational-treatment activities.	The Review Committee evaluates programs designed by the "expert" in terms of their consistency with a checklist of legal issues.	04
	Does not violate the Minnesota guidelines.	The Review Committee will assess compliance with the Minnesota guidelines by comparing the job performance with the requirements of the guidelines on a standard checklist.	3.79
Programming	Writes proposals for a behavior change (i.e., habilitative/ educational) programs and provides written reports of the program effects.	The Review Committee certifies that treatment plans submitted to them include at least the following: a) the targeted behavior stated in objective and quantifiable terms; b) the objective or goal of the treatment program; c) the change procedure to be employed, including the stimulus circumstances and environment under which the treatment would take place, the baseline procedures, the positive contingencies; d) the method of measuring the behavior and consequences throughout the treatment program; e) control or probe techniques to	4.09

Appendix B (Continued)

Content Category	Competency	Screening Criterion	Mean Rating
		determine the necessity of continuing treatment; f) a plan for program generalization and maintenance; g) the conditions under which the program would be changed or terminated. In addition, the committee certifies that reports suitable for submission to a county or state agency have been prepared at the time of termination of treatment or transfer. The reports will include the following elements: a) client description, name, age, sex, diagnostic and other psychometric information; b) a brief history leading to the problem which was treated; c) an objective description of the problem including quantification of the pre-treatment problem intensity and the current levels of behavioral occurrences (frequency, duration, etc.); d) a description in minimally technical but accurate language of the procedures employed; e) a quantitative (preferably graphic) summary plus a narrative description of the results; f) recommendations for methods of increasing the probability of program generality to a new setting.	
	Identifies variables which may contraindicate specific treatment procedures.	The regular performance checklist completed by the Review Committee will certify that the therapist obtains appropriate interdisciplinary consultation (medical, dental, social work, psychodiagnostic, etc.) regarding possible client characteristics which would contraindicate proposed behavior change program procedures prior to implementing the treatment programs.	3.96

Content Category	Competency
	Assessment, goal formulation and targeting.
	Can demonstrate and apply the effectiveness of procedures for various types of behavioral change categories.
Supervision	Supervision: Coordinates behavior change programs.
Communication	Communication: Written, oral, and graphic.

(Continued)

Screening Criterion	Mean Rating
The Review Committee evaluates the candidate's specification of appropriate and realistic program goals with a checklist. The checklist includes items such as operationalized target behaviors, the employment of the normalization principle, the availability of trained staff in adequate numbers, etc.	3.91
The Review Committee certifies that the programmer applies at least one procedure for each of the following categories with a concomitant demonstration of procedural effectiveness: a) increase in behavior; b) decrease in behavior; c) maintenance of behavior; d) teaching a new behavior; e) stimulus control.	3.83
The Review Committee certifies that the candidate monitors program procedures at regular intervals; acts as supervisor for line personnel; and consults with parents as necessary.	3.72
The Review Committee will rate the effectiveness of the behavioral programmer in two types of oral and written reports: a) ratings will be given on the clarity of description of program procedures and rationales; b) ratings will be given on the clarity of the descriptions of program results.	3.73